Mapping Violent Crime in Savannah's Historic District, 1993-2003

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Introduction

If you look at the first slide of the PowerPoint show I made for this presentation you will see me paddling the wooden sea kayak that I made myself. On the outside it is smooth and shiny, like a fine coffee table. On the inside, it is rough, with jagged pieces of fiberglass sticking out and wood left without sanding. Similarly, Savannah has a smooth side that you have seen during this conference: historic squares, Spanish moss, good restaurants, and gracious people. However, Savannah, too, like my sea kayak, has a rough side that we don't see at first glance. That rough side is violent crime, the topic of my presentation.

We can quickly view this rough side in Figure 1 of the slide show that accompanies this paper. I offer this map as a self-guided walking tour of violence in Savannah's Historic District from 1993-1997. As the map shows, one can walk by hundreds of robbery sites in the Historic District. It is a hot spot for robbery. One can also walk to nearby hot spots of homicide that are outside the Historic District, near streets such as Anderson, and Paulson. Taking this walking tour, one will see the neighborhoods whose characteristics form a central theme in this paper: city areas with desirable targets for robbery (the Historic District) are close to areas of disadvantage with high rates of interpersonal violence.

Figure 2 shows the varieties of violence in the Historic District in 2003 whose sites one could walk by. There are many more street robberies than business robberies. Of these street robberies, many are carried out with guns. Aggravated assaults are particularly clustered in the entertainment area of the District, in places such as River Street and City Market.

Does Savannah have a violent crime problem? In the decade from 1990 to 1999, there were 336 homicides in Savannah, for a rate of 25 per 100,000. In 1999, Savannah had a rate of homicide of 29 per 100,000. This was six times higher than the rate in New York City, or DeKalb County, Georgia. It was 4 times higher than the rate for the state of Georgia.

While preparing for this paper, I learned about the rough side of Savannah from people as well as from statistics. One day in September of 2004, I parked on East President Street and walked down to the place on the street in front of an elegant, small inn, the President's Quarters, where a tourist, Gail Vasilkioti, was shot in the back during a robbery five years ago. I went into the inn and spoke to the desk clerk. She was working there when it happened. She had put a pillow under Gail's head as she lay on the sidewalk and had visited her in the hospital during the weeks before she died. This desk clerk knows about the rough side and this crime affected her for years afterward. How does crime mapping help to explain such an event?

Bernard Jerome Green, who shot Gail, lived on East Anderson Street, not far from East President Street. He worked at the Gryphon TeaRoom, in the Historic District, not far from the crime scene. His mother lived nearby. He grew up in a disadvantaged area adjacent to the Historic District. Gail Vasilkioti and Bernard Green came together that evening because the robber from the disadvantaged area and the tourist at the elegant inn in the Historic District both occupied the same space. The ecology of crime brought them together because the two groups, victims and offenders, occupy the same "home range." Proximity of likely offender to likely victim helps to explain such a crime.

Figure 3 shows the numbers of robberies in Savannah from 1995-2004. Each yearly robbery count is compared to the 10-year average. Comparing one year to the average of a number of years is a good way to see if crime is going up or down for a particular time. For example, relative to the 10-year average number of robberies, the number of such crimes has stayed close to the average for the last three years, indicating that in recent years it has changed little.

Figure 4 shows the Historic District of Savannah. This is the part of the city that is fronted by the Savannah River and bounded by Martin Luther King Jr., Gwinett, and Broad Streets. It contains most of the city squares for which Savannah is famous. Figure 5 shows the violent crimes that occurred in this District for the period 1993-97: four homicides, 171 aggravated assaults, 684 robberies, and 1771 simple assaults. Figure 6 shows how the areas adjacent to the Historic District also have high numbers of robberies. In the Historic District, as we see in Table 1, street robberies are a far greater problem than business robberies.

Knowing the time of these robberies can help us to infer who the victims are. We can see this in Figure 7, which shows that robberies increase sharply after about 7:00 p.m. This could lead us to believe that most of the robbery victims are persons engaged in entertainment activities, who are visiting the area. Robberies by month indicate that August and September are the highest months. There are almost three times as many robberies in September as in April. (I have no explanation yet for this pattern.)

Research Methods

Let us turning now to the research methods I use in this study. The data on crime come from the Savannah Police Department for 1993-97 and 2003. I deliberately exclude rape from the data base to protect the privacy of victims. My geocoding rate was greater than 95%. I also use data from the U.S. Census, Savannah Area GIS (SAGIS) map layers, and Savannah Morning News homicide stories. The units of analysis are the 145 Census block groups within the city of Savannah, GA.

Spatial Patterns of Crime

The pattern of where crime is concentrated in the city is seen in Figure 10.While most of the statistical maps in this study use counts or frequencies to indicate high or low areas of crime, Figure 10 shows crimes as rates, where we control for the population size

of the block group. Here, the measure of crime is the average for a five year period, 1993-1997. Two block groups within the Historic District have high rates of violent crime and the Historic District is surrounded by block groups with high rates of violent crime.

Geographical patterns of violent crime have changed little over a ten year period in the city. This can be seen in Figure 11, which shows numbers of violent crimes for two time periods, the annual average for 1993-1997 and the count for 2003. Figure 13 shows the number of violent crimes in the city for 2003, and similar to the maps of rates in Figure 10, the Historic District and adjacent areas are the violent crime hot spots of the city. Figure 13 shows that one block group in the Historic District, block group 3001, had the highest number of violent crimes reported to the police in 2003. Block groups 1001 and 1012, adjacent to block group 3001, had the second highest numbers of violent crime.

The contrast in land uses between these areas is enormous. As you step off the Ferry from the Conference Center at City Hall Landing, you step into block group 3001, the area of the city with the highest number of violent crimes. This is truly the smooth side of Savannah, with its clubs, fine restaurants, picturesque squares and historical buildings. On either side of quaint block group 3001, just outside the boundary of the Historic District, are block groups 1001 and 1012, ranking among the highest crime areas of the city. In these block groups live disadvantaged families, many in public housing units.

Data Analysis

One of the statistical measures I use in this research is the "z-score." This number measures variation from the mean for one of the numbers going into the mean. The z-score is expressed in standard deviation units. The standard deviation is the average difference from the mean for all the numbers going into the mean. The Z- score tells us if a number is normal or abnormal, compared to the mean.

For an example, let's look at homicide in Savannah. We want to answer this question: is 2005 going to be an unusual year compared to other years? The mean number of homicides in the city for the ten-year period from 1993-2004 is 29. The standard deviation, or average yearly difference from the mean is 6. Since, by September 10, there had already been 23 homicides in the city, we might guess that the annual count of homicides might be, say, 32. To arrive at the z-score we subtract 32 (the possible count for 2005) from 29 (the ten year average). We get three. We divide this by the standard deviation of six to get .5, our measure of variation expressed in standard deviation units. Is 2005 going to be an unusual year: no, not compared to other years. The z-score is low.

Using z-scores allows us to easily compare variation in numbers with different ranges. Figure 14, for example, shows yearly variation in uniform crime reports of robbery, murder, and aggravated assault from 2000 to 2004 in Savannah. The annual variation for the three crimes is similar. As one goes up, the others go up. As one goes

down, the others go down. What conclusions can we draw from such an analysis? For one, since aggravated assault and murder vary together, it may be fortuitous whether an aggravated assault results in murder. We might also infer that murder, the best reported violent crime, can serve as an index of other violent crime in the city.

I also use a system of z-scores to measure relative disadvantage in the block groups of the city . Rather than relying on one single measure, I calculated a disadvantage index by adding these four z-scores:

1) Percentage of residents below the poverty level
2) Percentage of female headed households with children
3) Percentage of population in the workforce unemployed
4) Percentage of households receiving public assistance

Crime and Social Disadvantage

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Figure 16 shows this correlation between violent crime and social disadvantage in two graduated color maps of serious violent crime (homicide, aggravated assault, and robbery) shown side-by-side. Areas of high social disadvantage are also areas of high violence.

Figure 17 is a dot density map of robbery on a graduated color map of social disadvantage. The Historic District, as we have seen, has high numbers of robbery in comparison to other parts of the city. However, areas of high social disadvantage also have high numbers of robberies.

Figure 18 is a dot density map of homicide on a graduated color map of social disadvantage. This map shows few homicides in the Historic District, but many in the surrounding areas of high social disadvantage. Most homicides in the city come from disputes, and most such violent disputes are among intimates and acquaintances of disadvantaged block groups and occur in their own home neighborhoods.

One theory that may help to explain robbery in the Historic District is “Routine Activities” theory. This theory accounts for predatory crime by looking to the availability of “attractive targets” (persons who look like they have money) to “willing offenders” (persons predisposed to violence from the violent subcultures close to the Historic District). To test this theory, let us look at the home addresses of persons arrested for robberies in the Historic District in 2003 and 2004. These locations are in Figure 19, showing the entire city and Figure 20, showing just the area close to the Historic District. Most persons who commit robberies in the Historic District live close by. They share the same spaces as the victims and the “journey to crime,” as in the case of Bernard Green, is often a short one, within walking distance of home.

Children Exposed to Violence

Another useful theoretical framework for explaining the current crime situation in Savannah's disadvantaged neighborhoods and places of high victimization close to them is the developmental perspective. This theory looks to childhood events to help predict later violence and a risk factor of particular importance is exposure to violence during childhood. Let us turn to Figure 21 to see data on this theory for the Historic District.

Figure 21 shows homicide and simple assaults locations and a graduated color map indicating the percentage of the population of the block groups under 18 years of age. Unfortunately for the safety of people nowadays, areas of the city that had high numbers of homicides and simple assault ten or fifteen years ago also had high numbers of children. In some of the block groups with the highest numbers of violent crimes ten years ago, 50% of the population was under 18 years of age. The effect of this exposure to violence during childhood might well be a contributor to the adult violence that emerges years later among this population exposed to the risk factor.

Another way of seeing the possible contribution of exposure to violence and subsequent violent behavior is in Figure 22, which displays three variables: number of robberies, 1993-1997; number of children, 1993-1997; and the homes of Historic District Robbers, 2003. What this figures shows particularly is that disadvantaged residential block groups with large percentages of children also had relatively large numbers of robberies. These children grew up with armed robberies occurring around them. The neighborhoods that experienced such violence during these years also became the homes of the adult robbers, as we also see in Figure 22.

The micro maps in Figures 23 and 24 continue this theme. These maps display the many violent reported crime occurring within 1500 feet of Hubert Middle School and Spencer Elementary School in the period 1993-1997. These schools are close to the eastern boundary of the Historic District, and I have also plotted on the map the homes of Historic District robbers living in this area in 2003. The shockingly close proximity of these violent behaviors to neighborhood middle and elementary schools may likely be an indication of violence being learned by exposure to it. The current violence coming from such neighborhoods may have been created years ago during the developmental period of childhood through exposure to violence in the community. Such values can be very difficult to change when people become adults.

Regional Southern Subculture of Violence

Looking at the concentration and variety of violence in these residential disadvantaged neighborhoods around the Historic District, it appears that the theory of a regional southern subculture of violence may also offer a good explanation for homicide,

assault, and robbery. Assaults almost always involve violent disputes between people who know each other. In aggravated assaults, weapons are brandished or used. We can use distance from assault and homicide hot spots to comprehend the location of robberies. As we see by our crime maps, there are thick clusters of assaults and homicides in disadvantaged residential areas within a mile of the Historic District. Such hot spots of dispute-related violence indicate local subcultures of violence, where behaviors like threat of force or use of force are for some persons acceptable. Homicide and aggravated assault hot spots also are a sign of many guns being in an area as well as people willing to use them against others.

The general tendency to favor violence that we see in these spatial patterns of homicide and assault also manifests itself in robberies. Assault and robbery are different expressions of the same values and beliefs that support the use of violence. The difference can be spatial: persons at risk of violence may commit assaults against intimates and acquaintances in or by their homes. If the same persons feel comfortable walking about a nearby downtown area, like the Historic District, part of their "home range," it is there that they may be attracted to victims who appear to have money. Distance from residential subcultures of violence, indicated by hot spots of assault can, thus, explain, and even predict spatial patterns of robbery in the city.

Policies and Practices

The housing policy to alleviate this situation was suggested by Marvin Wolfgang, in his book *Subculture of Violence*, 40 years ago: spread out members of the subculture; have racial integration; have social class integration. According to Wolfgang, such housing policies would act to "water down" the values of a subculture of violence as its members become influenced by the dominant culture they would be living among. However unpopular such a policy of scattered site public and Section 8 housing might be, it may be the only policy to permanently end the cycle of violence.

Another policy that might be easier to implement would be to respond to calls about simple assaults with violence prevention measures that are shown by evaluations to work. The violent crime maps in this presentation show how simple assault is reported in large numbers. Such calls for service could be viewed as cries for help. An inter-agency social work team could move in immediately following such calls to implement the interventions indicated.

"Routine Activity Theory" offers crime prevention recommendations that promise immediate results, unlike the longer-term results of social work or housing policy. But can the prevention measures implied by Routine Activity Theory be applied to places like Savannah's Historic District? Indeed, city spaces can be designed with safety in mind, but the paradox is that an Historic District, by definition, must stay the was it was. It cannot easily become "Defensible Space." In fact, its very character is the result of land use policies that, while providing an amenable urban landscape, encourage victimization, especially robbery.

We have seen in this presentation how the proximity of targets to offenders helps to explain robbery in the Historic District. The virtues of the Historic District extolled by city planners exacerbate this situation. Mixed land uses make it difficult for residents to monitor strangers. An area of the city that is easy to walk around in means that targets can't be separated from offenders. An open grid street pattern and an inability to control access gives offenders open entrance to the area and also provides escape routes. Indeed, as we have seen, targets and offenders occupy the same territory and offenders know it much better.

Outside urban planning specialists coming to the city praise the design of Savannah's downtown Historic District, which dates from 1732. Modern urban planners favor spaces that encourage walking, spaces with mixed land uses, where goods and services are at hand and car travel is reduced. These planners bemoan the suburban residential development shut off by freeways and their interchanges. However, surveys of Savannah residents indicate that safety is their top concern and concern for safety may conflict, unfortunately, with idyllic urban plans.

Should urban space be amenable to walking? In the Historic District of Savannah walking is the activity most associated with robbery victimization. There are many more street robberies than business robberies in the Historic District. . Is mixed land use a good idea? From the Chicago School of Criminology to modern neighborhood organization theory, it has been shown that residents who share their space with commercial, institutional, and industrial land uses are more vulnerable than other to crime, because community residents cannot easily control public or semi-public spaces. Will there be public support for social class integration and scattered-site housing for the poor? Victimization risk is associated with proximity to disadvantage and people will oppose housing policies that they perceive might jeopardize their safety. In conclusion, this is a sad dilemma, for we delight in places like Savannah's Historic District. However, people's need for safety will always out balance their other environmental needs.

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